

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.9/14.3, 0.0/1.6File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000812**Date Inspected:** 02-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Zhu Zhonghai  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A  
**Component:** 77 Meter Mock-Up/89 Meter Mock-up

**Bridge No:** 34-0006**Summary of Items Observed:**

This Caltrans Quality Assurance (QA) Inspector Roscoe Dixon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island to periodically monitor welding and Quality Control (QC) functions.

While on site the QA Inspector observed and/or discovered the following. This QA Inspector witnessed the in process tack welding of a run off tab/lifting lug onto the of 77 Meter Mock-Up MUSA-SA274 flange plate reinforcement ring above weld joint # 5 between piece marks identified as p585 and piece mark p1082.

The ZPMC Certified Welding Inspector (CWI) Zhu Zhonghai informed the QA Inspector the approved welding procedure specification WPS-B-T-22313-B-U3b rev.1 was being followed to perform the welding. The ZPMC approved qualified welder Yang Lei ID # 040690 was utilizing Flux Cored Arc Welding (FCAW) process in the vertical (2G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored.

This QA Inspector observed the ZPMC Quality Control (QC) personnel Zhang Giao monitoring the weld parameters and documented them as follows: Amperage 154, welding voltage 26, with a travel speed of 110 millimeters per minute.

This QA Inspector visually verified the above listed approved WPS, which was posted near the welding operation and determined that the welding and work in progress on the items listed above appeared to comply with WPS and the contract documents.

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This QA Inspector witnessed ZPMC personnel cleaning up Weld Joint (WJ) # 5 on the outside of Flange Plate Reinforcement Ring with a grinder 77 Meter Mock-Up MUSA-SA274 between piece marks identified as p585 and p615 also weld joint # 5 between piece marks p573 and p1082.

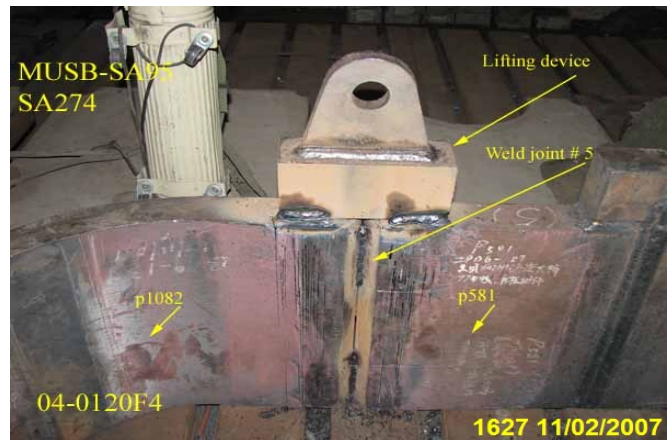
## 89 Meter Mock-Up:

This QA Inspector witnessed ZPMC personnel using a grinder to remove the excess weld metal reinforcement from 89 M longitudinal stiffener plate of Weld Joints (WJ) between piece mark mp532-C and mp532-B also (WJ) between mp534-C and mp534-B.

This QA Inspector witnessed ZPMC personnel using a grinder to blend the tack welds of web diaphragm to the upper SA23-1 also tack welds were being blended at the web plate to p213-1 lower plate.

## Orthotropic Box Girder:

This QA Inspector verified that Material for the Orthotropic Box Girder was being stored inside the welding shop at Bay # 7. See photographs below to provide additional detail.



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### Summary of Conversations:

As noted above and basic communication between QC Inspector and QA inspector when and where welding inspections are to be performed.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dixon,Roscoe	Quality Assurance Inspector
<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer

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